

Supplementary Information to

**Combined effects of the Pacific Decadal Oscillation and El Niño-Southern
Oscillation on Global Land Dry–Wet Changes**

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FIGURE CAPTIONS FOR SUPPLEMENTAL MATERIALS:

Figure S1 | Composites of the JJA detrended sc_PDSI_pm during El Niño. (a) El Niño, (b) El Niño–warm PDO, and (c) El Niño–cold PDO for the period 1900–2012. (d) Differences between in- and out-of-phase with the PDO condition, i.e., (b) – (c). The stippling indicates a 90% confidence level according to a two-tailed Student's t-test. Maps and plots were produced using licensed Matlab.

Figure S2 | Same as in Fig. S1, but for La Niña. Maps and plots were produced using licensed Matlab.

Figure S3 | Composites of the DJF detrended CRU precipitation anomalies (mm/month) based on 1971–2000. (a) El Niño PDO, (b) La Niña PDO, (c) El Niño–warm PDO, (d) La Niña–warm PDO, (e) El Niño–cold PDO, and (f) La Niña–cold PDO for the period 1901–2012. The stippling indicates a 90% confidence level according to a two-tailed Student's t-test. Maps and plots were produced using licensed Matlab.

Figure S4 | Same as in Fig. S3, but for the DJF surface soil moisture anomalies (kg/m^2) for the period 1948–2010. Maps and plots were produced using licensed Matlab.

Figure S5 | Same as in Fig. S3, but for the DJF sc_PDSI_pm during the period 1950–2012. Maps and plots were produced using licensed Matlab.

Figure S6 | Same as in Fig. S3, but for the cross-validated proportion of variance (R_{cv}^2) in DJF sc_PDSI_pm during the period 1950–2012. Due to the cross validation, negative values of skill are not only possible, but common in areas with weak or no ENSO signal. Only positive values are contoured. Maps and plots were produced using licensed Matlab.

Figure S7 | Same as in Fig. S3, but for the DJF SST anomalies ($^{\circ}\text{C}$) for the period of 1950–2012. Maps and plots were produced using licensed Matlab.

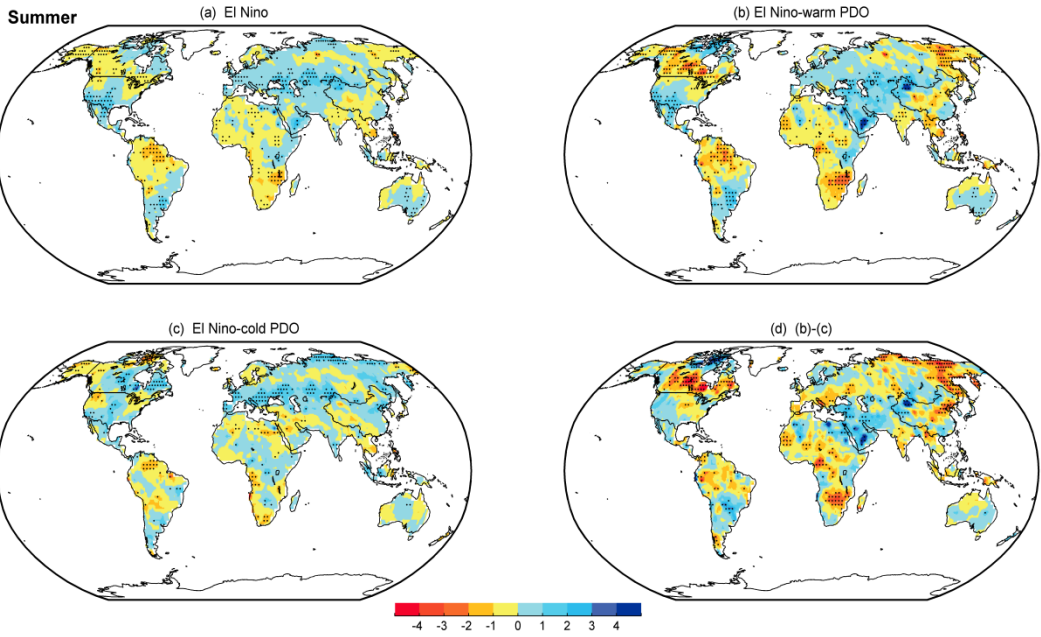


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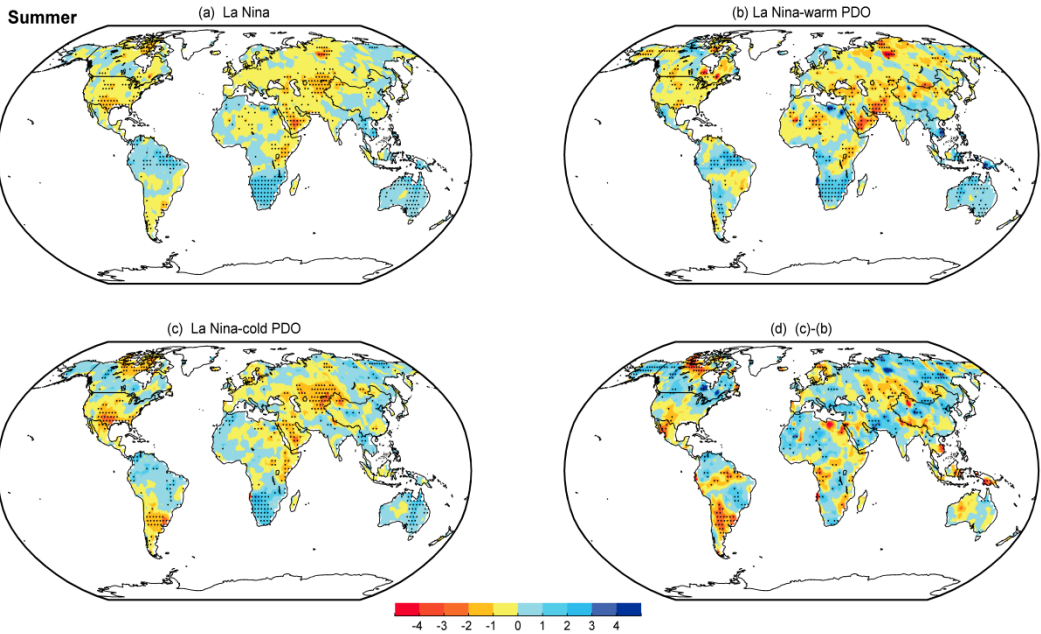


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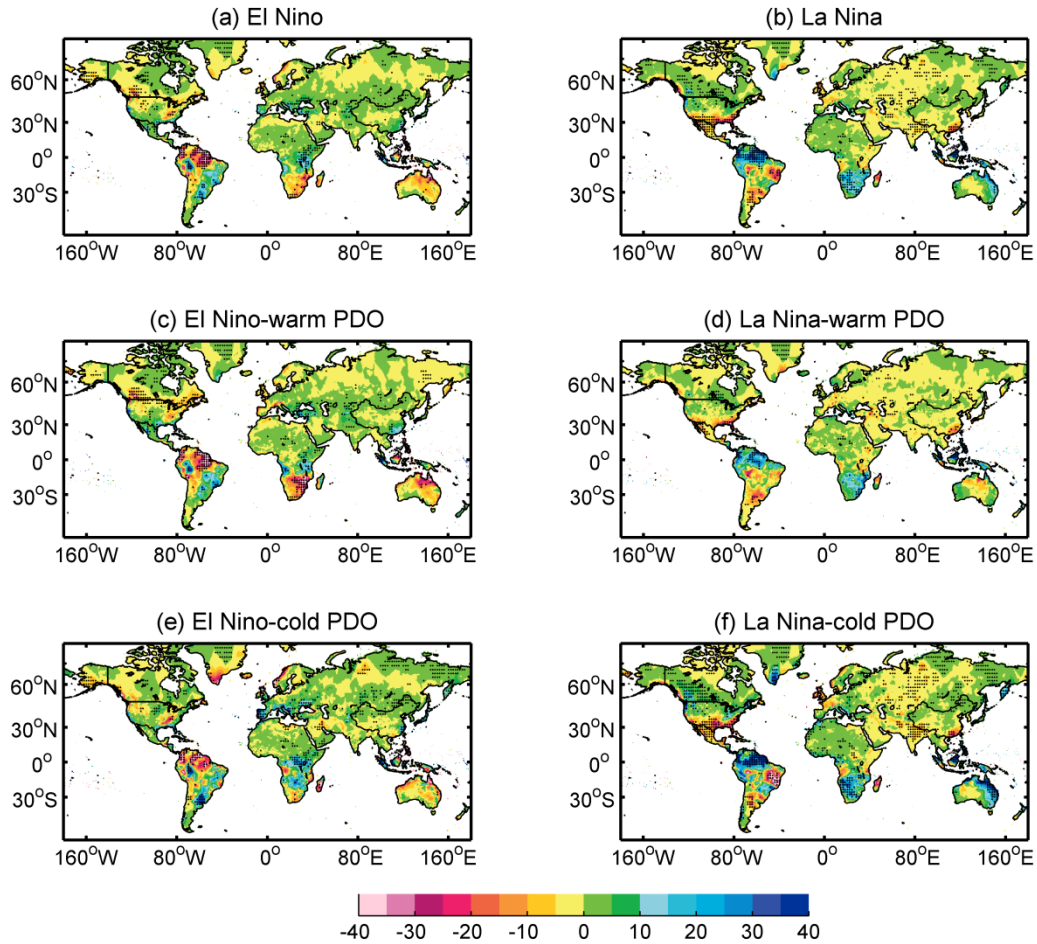


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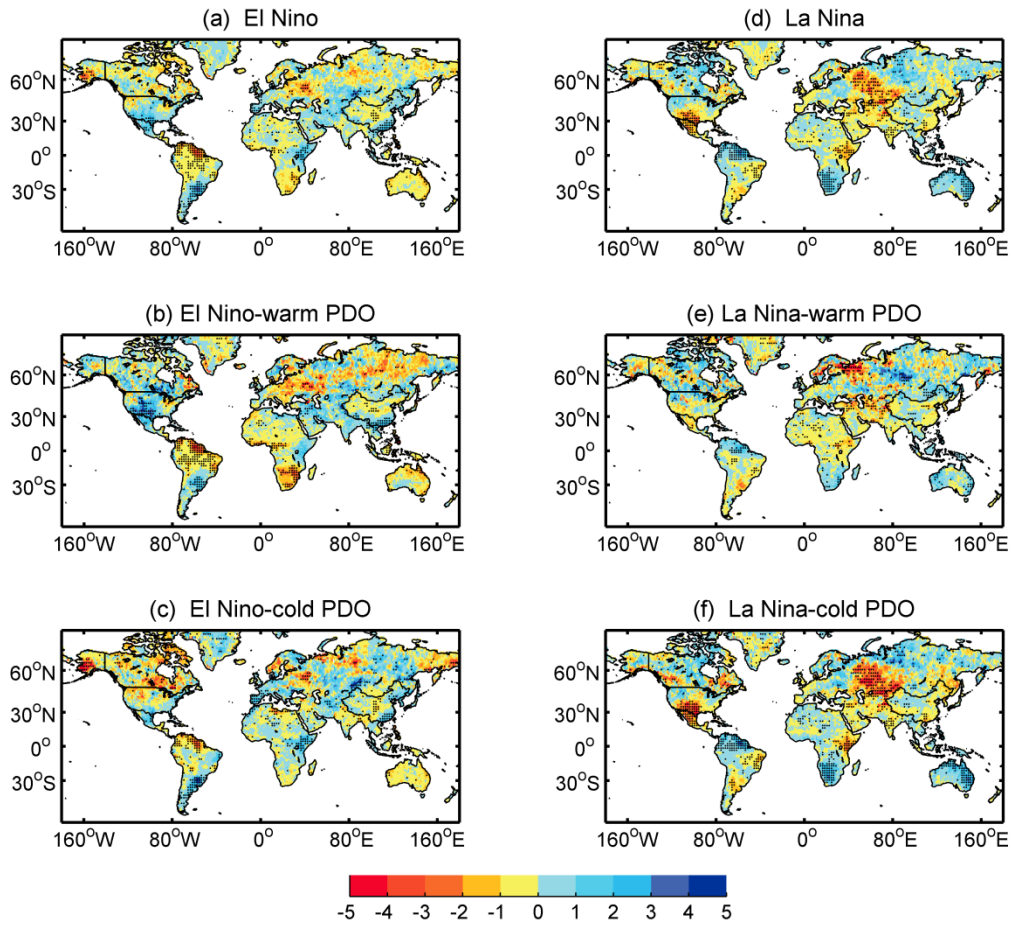


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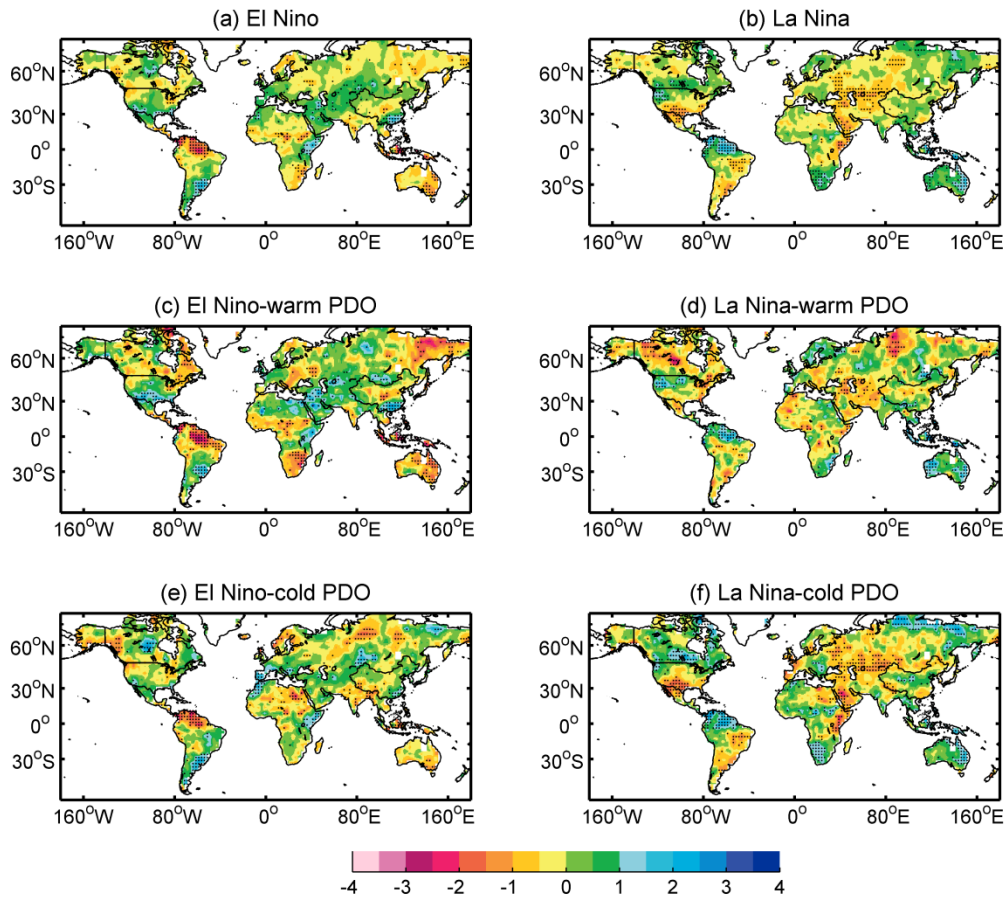


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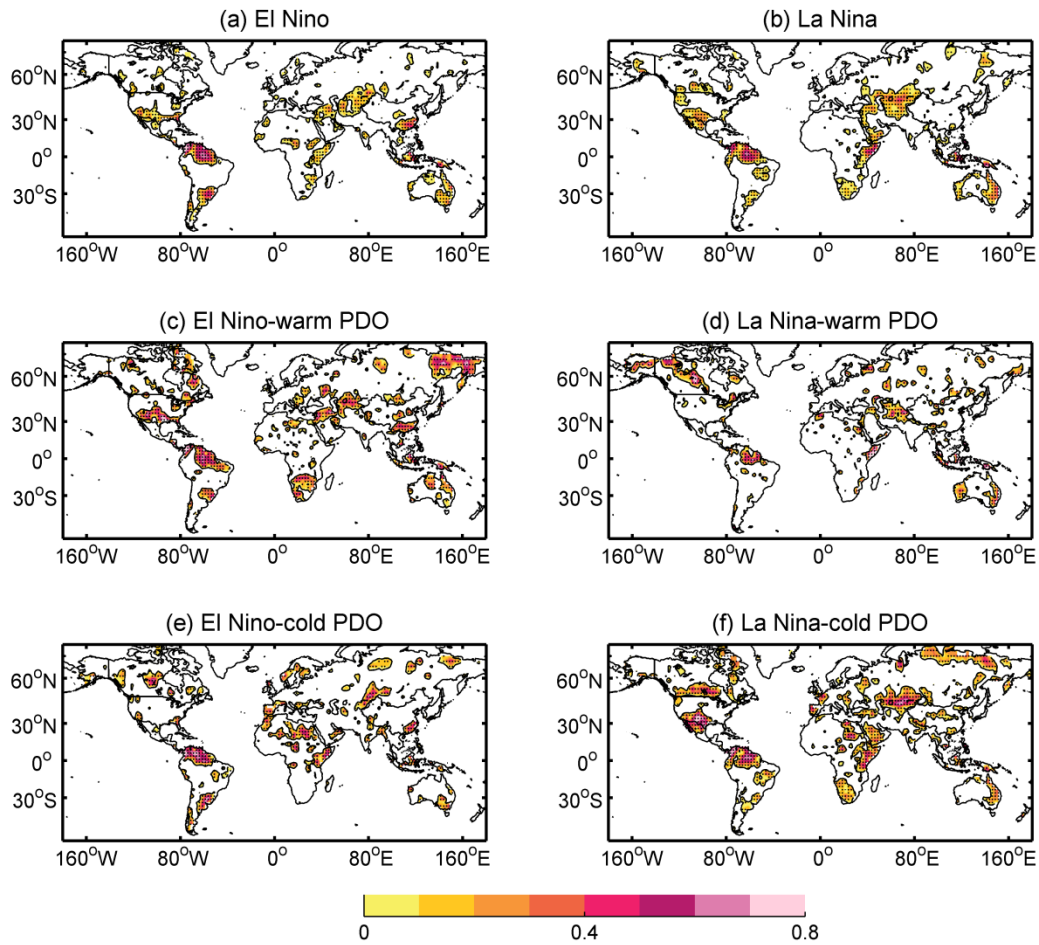


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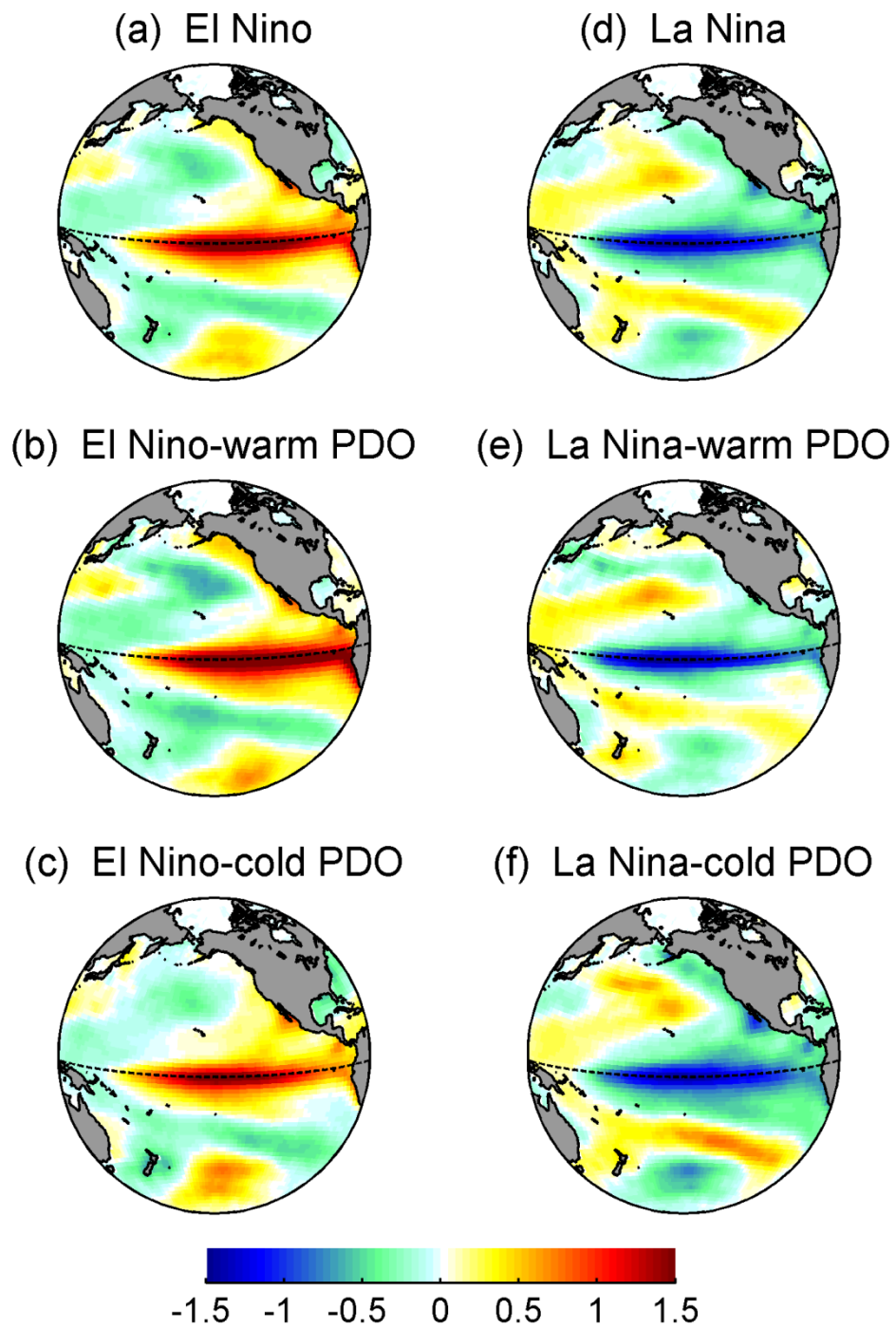


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